



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

PAGE 1 OF 1

Data Qualified?
Yes / No

October 2016

STORET Station Name: Helena Run 0.45 mi upstream of Hwy 27 Date: 12/5/14
STORET Station ID: 20020444 (G1CE0035) WBID: 2832 Latitude: 28.7628028
County: Lake RQ-2016-12-05-69 ORG ID: 21FLEN Longitude: -81.8876167
Receiving Body of Water: Lk. Harris Field ID: G1CE0035

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment				
<u>Natalie Ayala</u> <u>Katie Williams</u>										☒ Sample Container	☐ Van Dorn	☐ Pole		
										☐ Carboy	☒ Syringe			
										☐ Dipper	☐ Other			
										Equipment ID				
										Collection Method				
										☐ Wading	☐ Via Boat			
										☐ From Shore	☐ Canoe/Kayak			
										☐ Other (note below)	☐ Electric Motor			
										☒ Gasoline Motor				
Water Level: Dry / Low / <u>Normal</u> / High / Flooded										Matrix: <u>Fresh</u> / Marine / DI				
Meter ID# <u>Betty 67</u> Photos: <u>Yes</u> / No										Tide Falling: Yes / No / <u>NA</u>				
Time Zone	Time	Sample Depth (m)	Total Depth (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (ppt)	Secchi Disk (m)	Sp COND (µmhos/cm)	Temp. (C°)				
EST	1100	0.3	1.3	4.3	47	6.8	0.15	1.0	304	19.9				
CEN														
Biological Samples Collected: None / <u>HA</u> / <u>SCI</u> / <u>LVS</u> / <u>RPS</u> / LVI / Other														
Parameter Suite	Parameter Methods					Preservation	Acid Lot#	Expiration	pH Check					
Preserved Nutrients	☒ W-NH3 / ☐ W-NO2NO3 / ☐ W-TKN / ☐ W-TOC / ☐ W-S-A-TP					☒ Ice ☒ H2SO4			☒ <2					
Metals	☐ W-ICPMS ☐ W-ICP					☐ Ice ☐ HNO3			☐ <2					
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter					☒ Ice								
Chlorophyll	☒ CHLSUITE-W					☒ Ice								
Physical/Aggregate (Fresh)	☒ Alkalinity / ☐ W-F / ☐ W-TSS / ☐ TURBIDITY / ☐ W-CH-IC / ☐ W-COLOR / ☐ W-SO4-IC / ☐ W-TDS					☐ Ice								
Physical/Aggregate (Marine)	☐ Alkalinity / ☐ W-F / ☐ W-TSS / ☐ TURBIDITY					☐ Ice								
Macroinvertebrates	☐ MI-FW-QLDC					☐ Formalin								
Microbiology	☐ E Coli ☐ F Coli ☐ Entero ☐ QPCR					☐ Ice								
Periphyton	☐ ALGAE-ID					☐ Ice								
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA R					☐ Ice								
	☐ W-PC-AA-SF ☐ W-UHERB-AA ☐ W-GLYPH					☐ Other								

Contains
1:1
Sulfuric Acid
SA-6242080
EXP: 08/29/17
Warning!
See SDS

Notes:

Helena Run 0.45 mi
upstream of Hwy 27

RQ-2016-12-05-69
Date: 12/05/16

G1CE0035
Field ID ↑
STORET ↓
20020444

Signature: K Williams

Date: 12/5/14

Field Parameters Entered into LIMS: K Williams 12/8/14
(Initials/Date)

Field Parameters QC in LIMS: _____
(Initials/Date)

Date Migrated to STORET: _____
(Initials/Date)

Field Sheets Scanned/Saved: _____
(Initials/Date)

FDEP FORM FD 9000-3: PHYSICAL/CHEMICAL CHARACTERIZATION FIELD SHEET

SAMPLE ID _____ ORG ID 21FLEN LATITUDE 28.7628028
 COUNTY Lake STORET # 20020444 LONGITUDE -81.8876147
 DATE 12/5/14 TIME _____ SAMPLING AGENCY _____
 SITE NAME Helena Run
 FIELD ID/NAME GICE0035 RECEIVING BODY OF WATER Lk Harris

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>45</u> Silviculture _____ Field/Pasture <u>20</u> Agricultural _____ Residential <u>35</u> Commercial _____ Industry _____ Other (Specify) _____							Landscape Development Intensity Index (LDI) _____
Local Watershed Erosion (select one): ☐ None ☐ Slight ☐ Moderate ☐ Heavy Local Watershed NPS Pollution: ☐ No evidence ☐ Slight ☐ Moderate ☐ Heavy				Typical Width (m) <u>20</u> Depth (m) <u>40</u> Velocity (m/sec) <u>38</u> Transect <u>38</u> m wide			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>218</u> Right Bank: <u>218</u>				Hydrologic Modification Score (per FT 3101) _____			
High Water Mark: <u>.2</u> + <u>1.3</u> = <u>1.5</u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No			
Artificially ☒ No ☐ Mostly recovered, more sinuous Channelized: ☐ Some recovery ☐ Recent, severe				Canopy Cover % ☒ Open ☐ Lightly Shaded (11-45%) ☐ Heavily Shaded ☐ Moderate Shaded (46-80%)			

SEDIMENT / SUBSTRATE

Sediment Oils ☒ Absent ☐ Slight ☐ Moderate ☐ Profuse		Sediment Odors ☐ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☒ Anaerobic ☐ Other (Specify): _____		Smothering of Substrates Sand Smothering: None ☒ Slight ☐ Moderate ☐ Severe Silt Smothering: None ☐ Slight ☒ Moderate ☒ Severe Algae Smothering: None ☐ Slight ☒ Moderate ☐ Severe	
SUBSTRATE TYPE Assessment Tool: ☐ SCI ☒ RPS ☒ LVS ☐ LCI ☐ BioRecon			WATER QUALITY		
Woody Debris (Snags) _____ Undercut Banks / Roots _____ Leaf Packs or Mat _____ Aquatic Vegetation _____ Rock or Shell Rubble _____ Sand _____ Mud / Muck / Silt _____ Other _____ Other _____			Depth (M) <u>0.3</u> Temp. (°C) <u>19.9</u> pH (SU) <u>6.8</u> D.O. (MG/L) <u>4.3</u> D.O. Sat (%) <u>47</u> Cond. (UMHO/CM) <u>304</u> Salinity (PPT) <u>0.15</u> SECCHI (M) <u>1.0</u> Top: _____ Mid: _____ Bottom: _____ Meter ID: <u>Betty 67</u> TOTAL DEPTH <u>1.3</u>		
% Coverage _____ # Times Sampled _____ # Times Sampled _____			Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐ Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: _____ Exp: _____		
ABUNDANCE Not Obs. Rare Common Abundant Periphyton: ☐ ☐ ☒ ☒ Fish: ☐ ☐ ☒ ☐ Aquatic Plants: ☐ ☐ ☐ ☒ Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐			Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐ Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) _____ Clarity Clear ☐ Slightly Turbid ☒ Turbid ☐ Opaque ☐		
System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) _____			AMBIENT FIELD CONDITIONS / NOTES: <u>unseasonably warm, breezy, partly cloudy</u> ☒ The antecedent hydrologic conditions have been met to my best knowledge.		

SAMPLING TEAM

SIGNATURE

DATE

Katie Williams, Natalie Ayala

K Williams

12/5/14

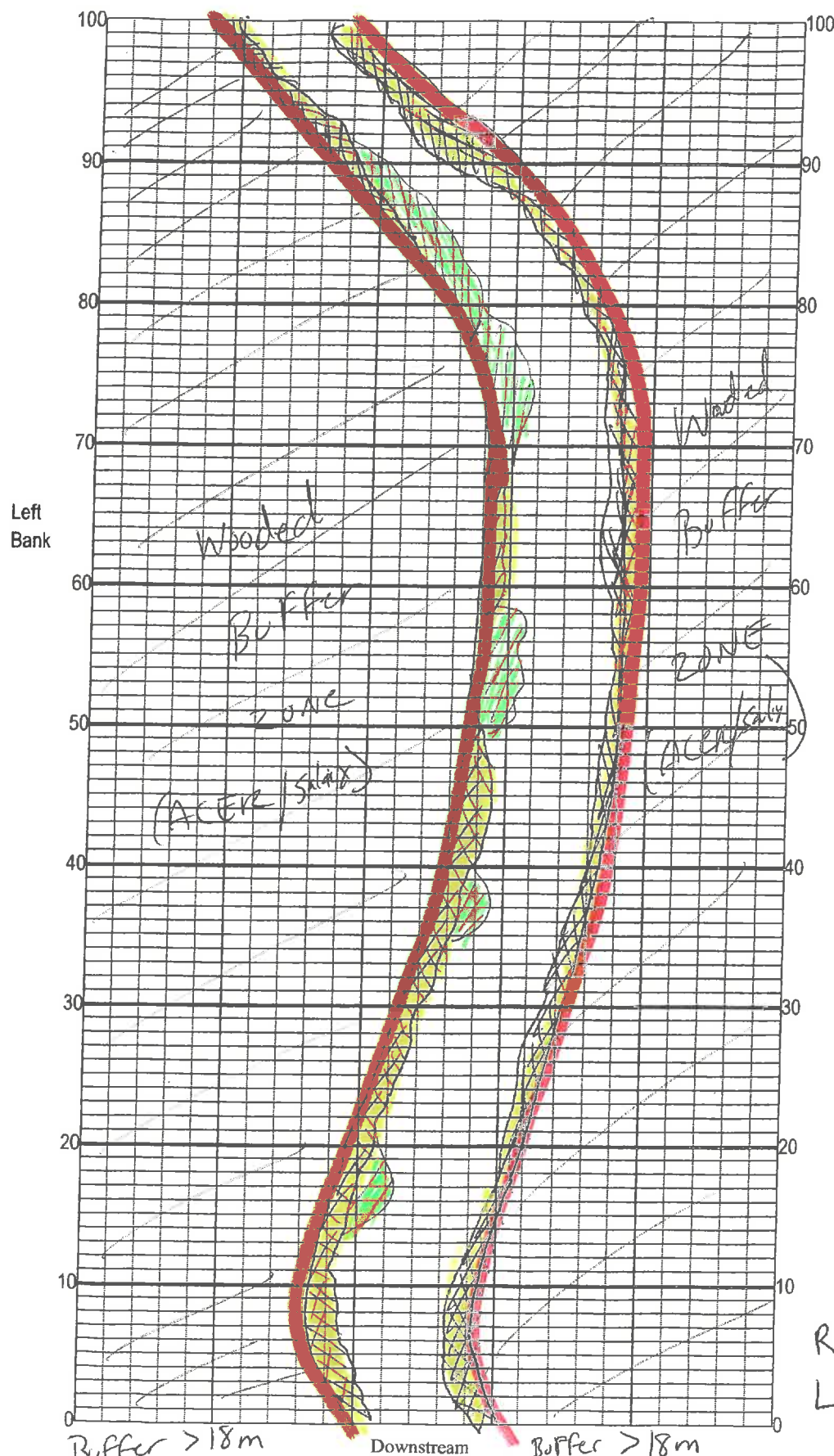
DEP Form FD 9000-5 Stream/River Habitat Assessment Field Sheet

SAMPLING AGENCY:		STORET STATION NUMBER: <u>20020444</u>	DATE (MM/DD/YY): <u>12/5/16</u>	RECEIVING BODY OF WATER: <u>Lk Harris</u>
REMARKS:	COUNTY: <u>Lake</u>	LOCATION: <u>Helena Run</u>	FIELD ID/NAME: <u>GICE0035</u>	

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags)	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered
Substrate Diversity <u>5</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>9</u> <u>12</u>	Greater than 30% major productive habitat present at site 20 19 18 17 16	16% to 30% major productive habitat, by aerial extent 15 14 13 12 11	6% to 15% major productive habitat 10 9 8 7 6	Less than 5% major productive habitat 5 4 3 2 1
Water Velocity <u>3</u>	Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec ≥0.33 0.31 0.29 0.27 >0.25 20 19 18 17 16	Max. observed at typical transect: >0.1 to 0.25 m/sec 0.25 0.21 0.17 0.13 >0.1 15 14 13 12 11	Max. observed at typical transect: 0.05 to 0.1 m/sec 0.1 0.09 0.07 0.06 0.05 10 9 8 7 6	Max. observed at typical transect: <0.05 m/sec; or spate occurring: > 1 m/sec <0.05 0.04 0.03 0.01 <0.01 5 4 3 2 1
Habitat Smothering <u>8</u> ----- Primary Score <u>25</u> <u>28</u>	Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae. 20 19 18 17 16	Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae. 15 14 13 12 11	Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth). 10 9 8 7 6	Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation. 5 4 3 2 1
Secondary Habitat Components	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks.	Good sinuosity within old channelized area. Evidence of dredging in the past (>25 yrs) but mostly recovered.	Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area.	Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks.
Artificial Channelization <u>20</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankfull to top of bank. Bankfull is within or above the root zone with few raw, eroded areas.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the root zone with raw, eroded areas.
Right Bank <u>10</u> Left Bank <u>10</u>	10 9	8 7 6	5 4	3 2 1
Riparian Buffer Zone Width	Width of vegetation greater than 18 m	Width of vegetation >12 to 18m	Width of vegetation 6 to 12 m. human activities close to system	Less than 6 m of buffer zone due to intensive human activities
Right Bank <u>10</u> Left Bank <u>10</u>	10 9	8 7 6	5 4	3 2 1
Riparian Zone Vegetation Quality	Over 80% of riparian surfaces consist of normal, expected plant community for given sunlight & habitat conditions (e.g., native plants; tree, shrub, and forbs represented, if appropriate). Minimal disturbance.	>50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed.	25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious.	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions).
Right Bank <u>9</u> Left Bank <u>9</u> ----- Secondary Score <u>78</u>	10 9	8 7 6	5 4	3 2 1

103 TOTAL SCORE

Date: <u>12/5/16</u>	Analyst: <u>Kathie Williams, Natalie Ayala</u>	Signature: <u>Kathie Williams</u>
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veg $\longleftrightarrow$ veg
 $(\approx 1.5 \text{ m} \times 100 \text{ m})$ $\longleftrightarrow$ $(\approx 2.0 \text{ m} \times 100 \text{ m})$

Location: Helena Run
Date: 12/05/2016
Sampler: Natalie Ayala/KMW

100 m: Latitude 28.76279591
Longitude -81.88762311

0 m: Latitude 28.76259293
Longitude -81.88662365

Substrates: Code key, draw proportionate habitat abundance.	%
1	10
2	20
3	30
4	40
5	50
6	60
7	70
8	80
9	90
10	100

	Snags	_____
	Roots/undercut banks	_____
	Leaf Packs (or mats)	_____
	Aquatic Macrophytes	180/c
	_____	_____
	_____	_____
	_____	_____

total # observed = _____

Pools # range expected = 1-2

Average width 20 m
Average depth 1.3 m

Velocity measured at 0 meter mark.

WQ & chemistry taken at 100 meter mark.

Habitat Smothering:
Note areas (on map) where sand or silt is smothering substrates, limiting habitability.

Bank Stability: Stable Banks
Note areas (on map) with unstable, eroding banks.

Riparian Buffer Width: 218 m
Note areas (on map) where natural vegetation is altered or eliminated.

Plants observed / other notes:

Buffer trees: *Acer rubrum*, *Salix*
 Patches of coontail along run -
 Veg lining banks, stable banks.
 Water level up from last visit.
 = 200 m² Veg Periphyton smothering
 = 150 m² Veg on veg. some
 silt.

$$\frac{300 \text{ m}^2 \text{ veg}}{2000 \text{ m}} = 0.175$$

Waterbody: Helena Run	Date: 12/5/11	County: Lake	Storet Number: 20020414
Analyst: Katie Williams	Signature: <i>K Williams</i>		

Comments:

Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1 m² of taxa present). Note in the boxes below if no dominant are selected, and note total macrophyte abundance rank for each section. Only the most common taxa are listed, so use blank spaces for additional taxa names.

Specimen for additional tests (name)		Meter Mark										Specimen collected (check)	Specimen for additional tests (name)		Meter Mark										Specimen collected (check)
HERBACEOUS SPECIES		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100		HERBACEOUS SPECIES		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	
<i>Alternanthera philoxeroides</i>													<i>Micranthemum glomeratum</i>												
<i>Bacopa caroliniana</i>													<i>Micranthemum umbrosum</i>												
<i>Bacopa monnieri</i>													<i>Myriophyllum aquaticum</i>	/		/	/				/				
<i>Bidens mitis laevis</i>			/	/						/			<i>Najas guadelupensis</i>										/		
<i>Boehmeria cylindrica</i>													<i>Nuphar luteum</i>				/	/							
<i>Centella asiatica</i>													<i>Orontium aquaticum</i>												
<i>Cephalanthus occidentalis</i>		/	/	/	/	/	/	/	/	/			<i>Panicum hemitomon</i>												
<i>Ceratophyllum demersum</i>		/	/	/	/	/	/	/	/	/	/		<i>Panicum repens</i>												
<i>Chara</i>													<i>Panicum rigidulum</i>												
<i>Cicuta maculata</i>		/			/	/	/	/	/	/			<i>Pistia stratioides</i>												
<i>Cladium jamaicense</i>		/	/	/	/	/	/	/	/	/	/		<i>Polygonum glabra</i>												
<i>Colocasia esculenta</i>													<i>Polygonum hydropiperoides</i>												
<i>Crinum americanum</i>													<i>Polygonum punctatum</i>									/			
<i>Diodia virginiana</i>													<i>Pontedaria cordata</i>			/						/			
<i>Eichhornia crassipes</i>													<i>Potamogeton illinoensis</i>												
<i>Eleocharis (wispy viviparous)</i>													<i>Ruellia simplex</i>												
<i>Hydrilla verticillata</i>		/	/	/	/	/	/	/	/	/	/		<i>Sacciolepis striata</i>												
<i>Hydrocotyle</i>		/	/	/	/	/	/	/	/	/	/		<i>Sagittaria kurziana</i>												
<i>Hygrophila polysperma</i>													<i>Sagittaria lancifolia</i>	/	/	/	/	/	/	/	/	/	/		
<i>Hymenocallis</i>													<i>Sagittaria latifolia</i>												
<i>Itea virginica</i>													<i>Salix caroliniana</i>	/	/	/	/	/	/	/	/	/	/		
<i>Lachnanthes caroliniana</i>													<i>Salvinia minima</i>	/	/	/	/	/	/	/	/	/	/		
<i>Landoltia punctata</i>													<i>Samolus parviflora</i>												
<i>Lemna</i>		/	/	/	/	/	/	/	/	/	/		<i>Saururus cernuus</i>												
<i>Limnophila sessiflora</i>													<i>Typha</i>	/											
<i>Ludwigia leptocarpa</i>													<i>Vallisneria americana</i>	/								/			
<i>Ludwigia palustris</i>													<i>Zizania aquatica</i>												
<i>Ludwigia peruviana</i>													<i>Oxycaryum cub.</i>	/	/	/	/	/							

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Helena Run County: Lake Date: 12/5/16 Investigators: Katie Williams / Natalie Ayala

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover	Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1	2	✓	2	60	1	2	✓	6
	2	2	✓						
	3	2	✓						
	4	2	✓						
	5	2	✓						
	6	2	✓						
	7	2	✓						
	8	3	✓						
	9	2	✓						
10	1	2	✓	6	70	1	2	✓	6
	2	2	✓						
	3	2	✓						
	4	2	✓						
	5	2	✓						
	6	2	✓						
	7	2	✓						
	8	2	✓						
	9	2	✓						
20	1	2	✓	6	80	1	2	✓	6
	2	2	✓						
	3	2	✓						
	4	2	✓						
	5	2	✓						
	6	2	✓						
	7	2	✓						
	8	2	✓						
	9	2	✓						
30	1	2	✓	6	90	1	2	✓	6
	2	2	✓						
	3	2	✓						
	4	2	✓						
	5	2	✓						
	6	2	✓						
	7	2	✓						
	8	2	✓						
	9	2	✓						
40	1	2	✓	6	100	1	2	✓	6
	2	2	✓						
	3	2	✓						
	4	2	✓						
	5	2	✓						
	6	2	✓						
	7	2	✓						
	8	2	✓						
	9	2	✓						
50	1	2	✓	6		1	2	✓	
	2	2	✓						
	3	2	✓						
	4	2	✓						
	5	2	✓						
	6	2	✓						
	7	2	✓						
	8	3	✓						
	9	6	✓						

Record "N" and check "Estimated" for points deeper than the Secchi depth; algae are presumed absent. Check "Estimated" if thickness estimated for deep points which can be seen but not reached.

Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. No estimated rank.

Record canopy cover as the number of small densiometer quadrants (out of 96) that HAVE canopy cover. Measure facing upstream at point 4, 5, or 6.

Collect algal mat sample following DEP SOP FS 7240 if the percentage of total sampled points with a thickness rank of 4, 5, or 6 is >20%.

STORET Station Number: 20020444

Secchi depth 1.0
Estimated? 1

points ranked 4-6 20
total points assessed 99
% points ranked 4-6 20%

Check accompanying data collected at same site/date:
Algal mat sample ✓
Linear Veg Survey ✓
Habitat Assessment ✓
SCI/Biorecon ✓
Water sample ✓
RQ- 2016-12-05-69

Algal Thickness Rank	
N	rough, no algae, slimy, algae up to 1mm
3	>1mm - 6mm
4	>6mm - 20mm
5	>20mm - 10 cm
6	>10 cm